



A.D. 1839 N^o 8123.

S P E C I F I C A T I O N

OF

FREDERICK PARKER.

RE-BURNING ANIMAL CHARCOAL.

L O N D O N

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A.D. 1839 N° 8123.

Re-burning Animal Charcoal.

PARKER'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FREDERICK PARKER, of 138, New Gravel Lane, Shadwell, in the County of Middlesex, Charcoal Manufacturer, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her
5 Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Twenty-second day of June, in the third year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Frederick Parker, Her especial licence, full power, sole privilege and authority, that I, the said Frederick Parker, my exors, admors, and assigns, or
10 such others as I, the said Frederick Parker, my exors, admors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, my Invention of "IMPROVEMENTS IN REVIVIFYING OR
15 REBURNING ANIMAL CHARCOAL;" in which said Letters Patent is contained a proviso that I, the said Frederick Parker, shall cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in Her said Majesty's High Court of Chancery within four calendar months next and immediately after the date
20 of the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Frederick Parker, do hereby declare the nature of my said Invention, and the manner in which the same is to be performed, are fully described and

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ascertained in and by the following statement thereof, reference being had to the Drawing hereunto annexed, and to the figures and letters marked thereon, that is to say:—

It is well known that in refining sugar much animal charcoal is employed in the process of what is called discolouring the liquors (sugar dissolved in 5 water), and that the animal charcoal so employed, after having been used for some time, requires to undergo a process called “revivifying,” which, in fact, is a reburning or recharging, and for performing such process various arrangements of apparatus have been employed, such as retorts, pots, and ovens, closed as air-tight as possible during the time of applying heat to the same; 10 and the modes or processes of operating with such apparatus have been, first, to permit the charcoal to remain to cool down in the same vessel in which it has been heated, which, though beneficial as regards the quality of charcoal reproduced, is, nevertheless, tedious and costly, and it is difficult to keep good joints; secondly, the charcoal under operation having been heated 15 to the extent required in closed retorts, pots, or ovens, the charcoal after opening the apparatus has been drawn in the highly heated state through the atmosphere into coolers or vessels capable of being closed air-tight, or nearly so, which circumstance of drawing charcoal in a highly heated state through the atmosphere materially injures the quality of the charcoal reproduced. 20 Now, the objects of my Invention is so to conduct the process of “revivifying,” or reburning animal charcoal, that the retort, oven, or vessel shall not require to be cooled down, and yet at the same time the drawing and cooling process shall not cause the charcoal to pass into the atmosphere when in a red hot condition or in a state to be injured thereby. Hence, according to my 25 process the vessel or the part thereof wherein the heating takes place, and the vessel or receiver, or the part thereof wherein cooling takes place, are so arranged in respect to each other that they are suitably connected, and, by preference, permanently connected, as to exclude the air from the charcoal from the time it enters into the heating part of the apparatus until it leaves the 30 cooling part of the apparatus in such a state as not to be prejudicially acted on by contact with the atmosphere.

Having thus generally pointed out the object and nature of the Invention, I will proceed to describe an arrangement of apparatus such as I employ and find fully to answer.

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DESCRIPTION OF THE DRAWING.

Figure 1 represents a section of an apparatus arranged according to my Invention, and wherein animal charcoal may be revived or reburned and

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cooled in continued succession, without passing into the atmosphere till sufficiently cooled down ; Figure 2 is a plan in section, and Figure 3 is a transverse section in elevation of the same apparatus as is shewn at Figure 1. In each of the Figures the same letters indicate similar parts, *a* being a vertical
5 retort or vessel of iron or other suitable material, which is surrounded by the flues of the fireplace or furnace *b*, as is shewn in the Drawing ; *c* is a hopper or chamber in which a constant supply of animal charcoal requiring to undergo the process of reburning is kept up. Hence, as the charcoal is drawn or permitted to descend from the lower part of the retort or vessel *a*, fresh quantities
10 of animal charcoal will fall or be forced into the retorts *a* ; by this means the upper part of the retort *a* will be closed against the descent of air to that part of the retort wherein the charcoal is red hot, or so highly heated as to be prejudiced by contact with the atmosphere. *d* is the cooling vessel, which is connected to the lower part of the vessel *a* by a sand joint *e*. The cooler *d*
15 I prefer to be of thin sheet iron and of considerable extent, in order to offer sufficient cooling surface. The lower end of the cooler *d* is closed by a bottom and a slide *f*, as is shewn in the Drawing, there being a series of openings in the bottom and slide, so that when it is desired to draw charcoal, the openings are made coincident in the slide and
20 bottom ; at other times they are to be slided. The charcoal after descending from the vessel *a* progressively becomes cooled in the vessel *d*, and by the time it arrives at the point *f* may safely be withdrawn, and it will be evident that the time allowed for heating in the vessel *a*, and the time allowed for cooling in the vessel *d*, may be controlled by the rate at which the drawing of
25 the charcoal takes place. And I would remark that it is not absolutely necessary to have the bottom or lower end of the cooler *d* closed as described, as it may be so arranged that the charcoal which has descended and passed out of the cooler shall rest in a heap and close the end of the cooler ; and the speed of the descending of the charcoal under operation will depend on the
30 rate at which the charcoal is removed. Indeed the apparatus may be varied without departing from my Invention, so long as the main object thereof be retained, care being observed that the animal charcoal be not too early exposed to the action of the atmosphere. *g* is an apparatus for measuring the charcoal as it comes from the cooler *d* ; this apparatus has a slide and
35 perforated bottom, similar to that above described to the cooler *d*.

Thus it will be seen that the animal charcoal under operation is revived or reburned and cooled down without the heating apparatus becoming cooled, and without the animal charcoal being drawn from the heated retort into the atmosphere, as were the practices formerly resorted to.

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Having thus described the nature of my Invention, and the manner of performing the same, I would have it understood that what I claim is, the mode of revivifying or reburning animal charcoal as above described.

In witness whereof, I, the said Frederick Parker, have hereunto set my hand and seal, the Twenty-second day of October, in the year of our Lord One thousand eight hundred and thirty-nine.

FREDERICK (L.S.) PARKER.

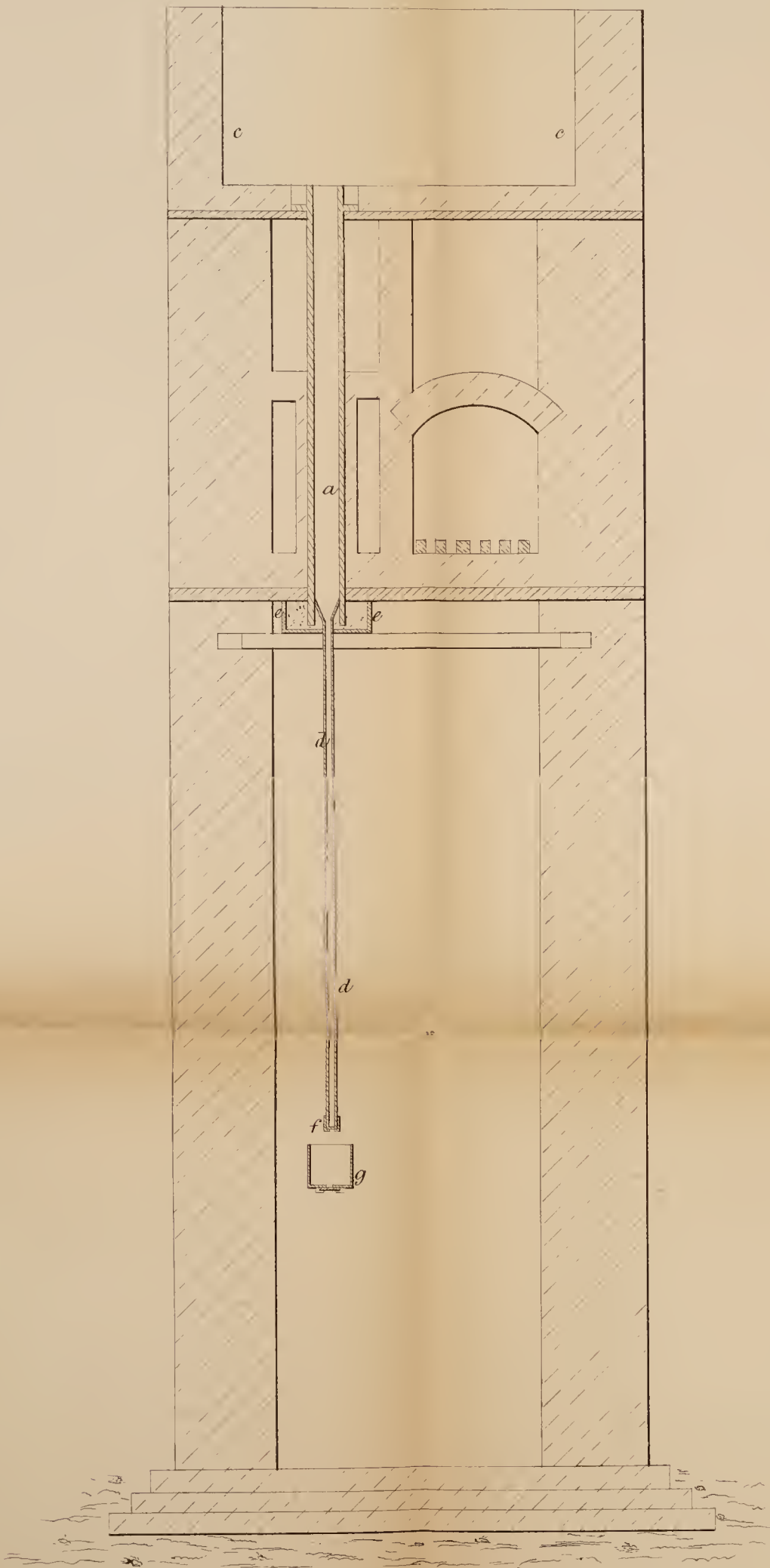
AND BE IT REMEMBERED, that on the Twenty-second day of October, in the year of our Lord 1839, the aforesaid Frederick Parker came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose. 10

Inrolled the Twenty-second day of October, in the year of our Lord One thousand eight hundred and thirty-nine. 15

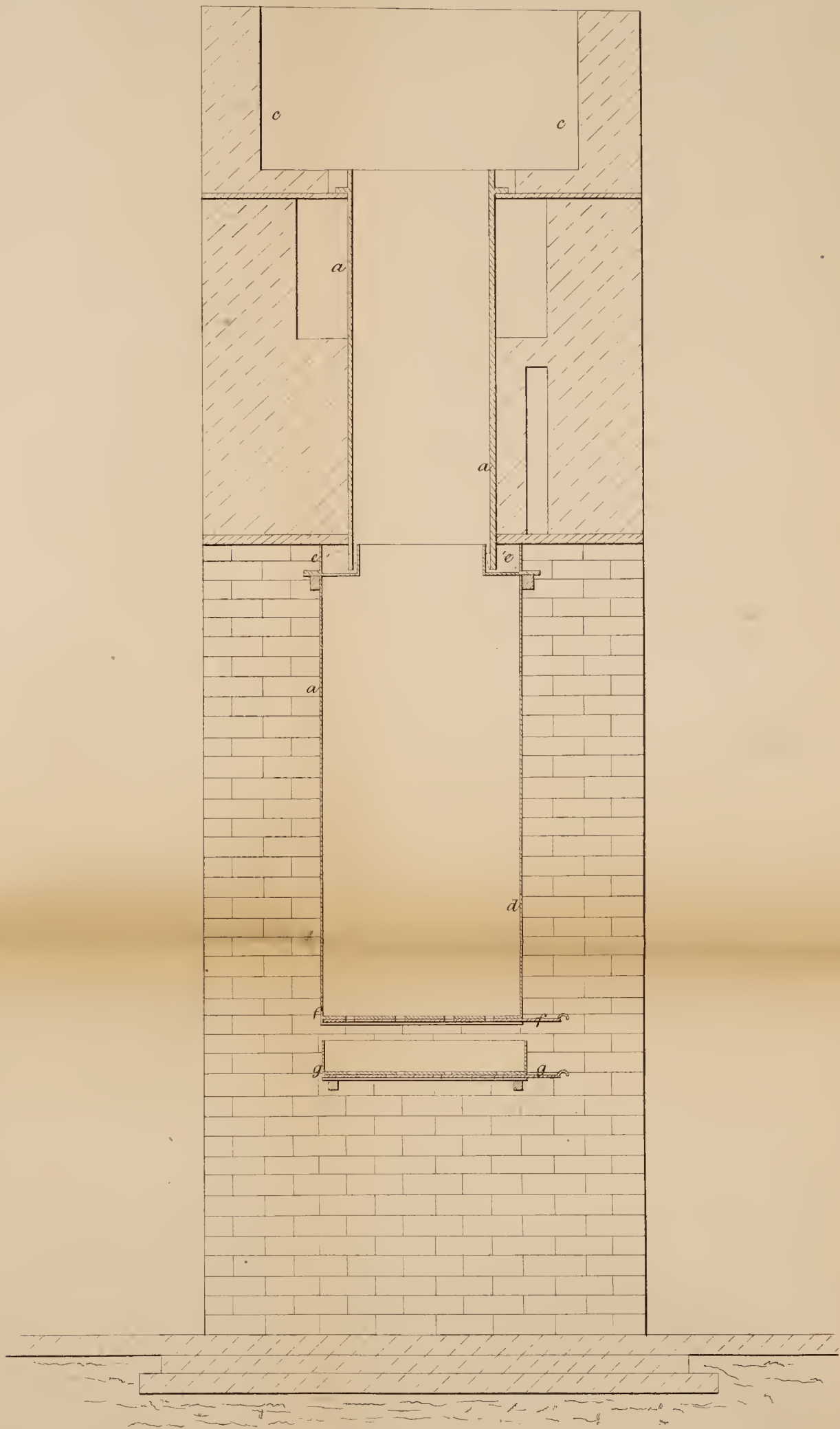
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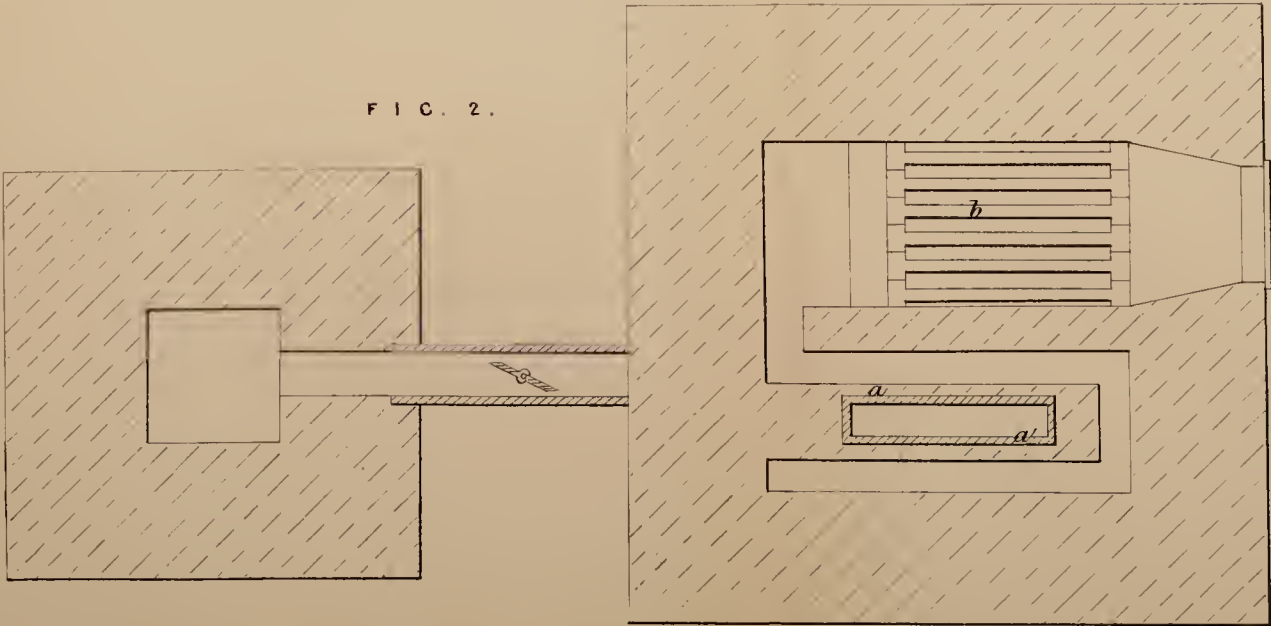
F I C. 1.



F I C. 3.



F I C. 2.



The enrolled drawing is colored.

